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WANYAKYUSA AGRICULTURE

By D. H. Thwaites, Agricultural Assistant, Tanganyika Territory

131 The Wanyakyusa occupy the District of Rungwe in the Southern Highlands Province. The district lies between 9° and 9½° S. latitude
133 at the northern tip of Lake Nyasa. The altitude ranges from 1,500 feet to 9,500 feet. The
631 district is divided into twelve chiefdoms. The Administrative Headquarters are at Tukuyu, which was known before the British occupation as Neu Langenberg.

Inhabitants

101 The local people are not indigeneous to this area. They came, tradition has it, from
[173] Mahenge via Ukinga after many tribal fights. They are akin to the Wahenga in Nyasaland bordering on the Tanganyika boundary. It is
191 estimated that only 10 per cent of the Wanyakyusa speak Kiswahili. According to the 1935
161 census the total poulation was 153,204. The
162 total number of tax-payers in 1942 was 35,304, or 23.04 per cent of the total population.

181 The people themselves are extremely industrious and intelligent. As there are 90 people to the square mile, living conditions are
105 crowded and emigration is continually taking place. The people are partial to litigation over cattle and women. The number of cases heard annually in the Native Courts is about 6,000. There is no one historical and traditional head of the tribe. The twelve Chiefs are, in reality, hereditary Headmen who have been selected by Government to be Chiefs. They are in effect only *primi inter pares* in native eyes, the outlook of the people being unusually democratic for a native tribe.

105 The people live in houses made of wattle and daub or bamboo frame, with thatched
342 roof, and villages are sited mostly along ridges.
361 Rectangular houses are now built instead of the round huts of former days. They often stand in rows with a main street down the middle with bananas in the background. The more progressive natives build with sun-dried or burnt brick. Stock are stalled in the same house owing to the prevalence of thieving, but sleep in separate rooms.

Climate

132 The rainfall of the district varies in the different areas. In Tukuyu itself the annual average for 25 years (1918-1942) is 100.22 inches. On the Lake shore the average is probably higher, but no continuous statistics are available. The heaviest rainfall months are from December to May, but, in most years,

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132 some rain falls every month in the part north of Tukuyu. Very heavy rains occur at times, such as in 1935 when 139 inches are recorded on the lake shore in the month of April. In November, 1942, 12½ inches fell in eighteen hours in Tukuyu. The average mean temperature for Tukuyu is 23.66°C. The range is low while monthly variation average is only 5-6°C.

Soils and Vegetation

134 The district may be divided into three sections according to soil and vegetation types.
[133] The higher altitudes to the north are dominated geologically by the extinct volcanic range extending round Rungwe Mountain. The dark soil, composed of decaying vegetable matter overlying volcanic ash in varying layers, is,
137 generally speaking, fairly fertile, depending on the age of the subsoil. The vegetation is dominated by rain forest, though much of this has been destroyed. Grass (*Hyparrhenia* spp. *Digitaria horizontalis, Setaria*) and *Crotalaria* spp., with high *Sesbania* and *Dodonea* shrub on the slopes of the mountain range, are found with *Milletia, Ficus* and *Cissus* spp., and occasional stretches of bamboo on the hill sides and in the river beds and ravines. To the west of Tukuyu, woodlands of *Brachystegia*, associated with *Albizzia* and *Parkia* spp., cover such areas as are not cultivated and where the grasses (*Hyparrhenia* and *Digitaria* spp.) can only be burnt during October owing to the wet climate.

134 In the medium altitudes south of Tukuyu, the soil is a red clay loam, derived from granite with intrusions of dolorite, diorite,
[135] basalt and quartz. It is in the area of these soils that hot springs, lime, coal and mica occur. This part is heavily wooded with
137 *Brachystegia* associated with *Albizzia, Dalbergia, Ficus, Cissus* spp. and *Chlorophora excelsa*, but is at present being gradually cut out to make room for cultivation. No forests of economic value occur, except for fuel, small quantities of wild rubber vine, *Landolphia* spp., which have become of value in wartime, and some pockets of *Adina microcephala*. Dominant grasses are *Imperata cylindrica, Digitaria*, and *Hyparrhenia* spp.

134 The lower altitudes below 2,000 feet are situated in a wide plain along the northern
[133] and western shores of Lake Nyasa, and this is composed of soils mostly transported from the highlands. These are extremely fertile. The sub-
[137] soil is granite and the top soil varies greatly in thickness.

137 in thickness. This part is devoid of timber except along some river banks—*Albizzia* and *Acacia* spp.—and fuel has to be carried some distance. The dominant herbs are *Crotalaria striata* and *Hyparrhenia* sp., with *Phragmites* and *Pennisetum purpureum* along the rivers.

Methods of Cultivation

241 462 The work of cultivation is equally divided between the sexes. After the plots have been cleared and hand-hoed by the men, it is women's work to plant, clear, harvest, winnow and sell at the market. Men's work consists of clearing, hoeing and looking after the cattle.

242 241 Rotation of crops is practised, as it must be in an area where all land is far from productive. In the highlands, 9,500 feet to 5,000 feet, the rotation in valleys is sweet potatoes, finger millet, groundnuts, finger millet, groundnuts, finger millet and rest for five years, or sweet potatoes, maize for five years and rest for five years. On the hillsides, finger millet and pigeon pea or finger millet alone are sown every fourth year.

In the medium altitudes, between 5,000 feet and 2-3,000 feet, the rotation is finger millet, maize and yams, beans, rested and grazed. Continual planting of rice cannot take place as fertility is so quickly impaired.

In the lower altitudes, below 2,000 feet, rice is planted continuously for some 15 years and the land is then rested and grazed for about 8 years.

Diet and Food Crops

262 No one food is the staple throughout the district, but plantains, maize and sweet potatoes for the higher altitudes and rice on the lake shore are generally eaten, with additions that vary from area to area.

243 Maize is planted both on contoured ridges and on flat land. Holes are drilled generally 3 feet apart and each hole has 3 seeds planted in it. Maize is usually interplanted with beans [241] or Bambarra groundnuts, groundnuts, cowpeas or pigeon peas. Planting takes place in the highlands in July to September and harvesting in February to April. In the medium altitudes, two crops are planted annually, in November to February and again in May to June. In the lower altitudes, however, little maize is grown and this is sown in November to December [251] and harvested in March and April. Maize is stored in mud-covered basket granaries or is [262] sold as soon as it is dried. It is eaten roasted or boiled with beans. The varieties of maize grown vary but they are mostly of the hard flint type.

245 Bananas and plantains are grown all over the district except in the highlands to the north and west. Numerous local varieties abound, with a red plantain and the *Sukari* variety of [262] banana as recent introductions, and are used 273] exclusively for food, no beer being made. They are mostly dried and pounded with pestle and [251] mortar to be used as flour, although they are also eaten whole after roasting.

244 Sweet potatoes are extensively grown. They are planted on contoured ridges from 3-4 feet high. Planting distances vary from 6 inches to 1 foot in either direction. They are planted in March to May and north of Tukuyu take eight months to mature, but south of that place four [252] months is sufficient. Sweet potatoes are eaten boiled or roasted.

243 Finger millet is used more for beer-making [262 than for food. It is always sown broadcast in November to January and harvested in March 273] to May. The land is first hand-hoed and all grass put into heaps and burnt when dry. In the highlands to the west the trees are lopped and branches piled in heaps to be burnt. Contoured ridges are put in at intervals depending on the slope of the land. The harvesting is carried out just before the grain is ripe by cutting off the heads and stacking in the field while ripening proceeds. The heads are then collected into large baskets and steeped in water for a day, after which they are taken out and rubbed with the hands to separate the [251] grain from the chaff. The millet is then dried and stored in earthenware pots or mud-covered baskets until required. It is reported that it can be stored for five or six years by this method, but I have not verified this personally.

244 Beans are nearly always interplanted with 252 maize or sown in banana plantations and the 262 local seed is of mixed varieties. They are eaten boiled as a relish with other food such as maize. The leaves are also eaten dried or fresh.

245 Groundnuts are grown in the medium and 251 lower altitudes. Planted in November to February and harvested in April to July, they are dried in the shell and eaten raw.

243 Rice is grown on the lake shore and also in the neighbouring foothills. It is sown broadcast in November to February and harvested in May to August. Yields are not high in the foothills, being about 6-7 bags of paddy to the acre. Many local varieties are grown, such [252 as Musafiri, Mwangulu, and Marula. The hill 438] rice is eaten boiled, but most is sold hand-hulled in the markets for purely local consumption.

241 Other foodstuffs grown are coca-yams, cow peas, pigeon peas, Bambarra groundnuts, ginger, cardamon, groundnuts, wheat, pumpkins, peppers, citrus, sugar cane and European vegetables, including a quantity of European potatoes. [177]

Economic Crops

245 One of the main cash crops is coffee, which was introduced about 1900 by the Berlin Lutheran Mission, but it was not grown by natives until 1930 when an attempt was made to organize an industry. It had already been tried from 1924 onwards by Europeans but had gradually died out, giving place to tea. 177

245 Native coffee has not been truly successful and many reasons are suspected for this. In effect, the coffee suffers from many pests and diseases and yields are so low as to be almost uneconomical even to a tribe of very low individual annual income. It has become obvious that coffee can only be grown by natives if shaded by bananas and mulched heavily with banana trash. Multiple-stem pruning is gaining favour.

Seedlings are planted out in December and the first crop is obtained four years after. The area planted rose in 1939 to 5,864 acres and the number of native planters to 7,966. Yields, however, are low, varying from 131.4 kg. to 20.4 kg. parchment to the acre. Hemeleia leaf disease and yellow and white borer are prevalent all over the coffee-growing area. Over the period since 1932 the price paid to natives has averaged 44 cents a kg. for parchment. [136]

[438] [432] All coffee is collected and sold by Native Authority after rough grading and, in order to encourage better preparation, much lower payments are made for the inferior grades. A native staff is employed to visit coffee plots and to give instructions, and it is noticeable that the quality of preparation varies with the price.

175 243 The cultivation of rice on the lake shore was started by Chief Koroso in 1896 with seed obtained from Arab traders in Nyasaland and the Moravian Mission issued further seed in 1898. Being an innovation, rice was not popular and little was grown except for small local sales. In 1917 the Government issued seed and tax was paid in rice instead of money. Interest was hereby aroused and the cultivation of rice was started. In 1932 several other kinds of seed were issued and now sixteen varieties are found. "Faya", which was issued in 1929, gives the best yields and is the variety chiefly grown, other varieties being Bungala, Marula [65] 243

243 and Mapiko, although very little of these is sold. Ploughs have been introduced into the area as it is flat and the total number in use in 1942 is about 400. The first ploughing is carried out in June or July when the ground is still wet, and the second ploughing in October to February. Planting, which is all broadcast, is carried out in November to the middle of March and the harvesting is done in May to September.

256 A first mill was erected at Ipyana on the lake shore in 1942 with a capacity of 9 tons of rice in 15 hours. Another is now on its way from India with a capacity of 14 tons of rice in 15 hours and should be erected some time in 1944.

248 A small acreage of cotton is also sown along the Songwe River boundary, which borders on Nyasaland, with seed obtained from that Colony. Conditions, however, are not suitable on the remainder of the lake shore and expansion is not encouraged.

241 439 A list of exports from the district with approximate weights for 1942 is appended:—

Article	Weight in tons
	Tons
Mixed beans	550
Coffee	50
Groundnuts	50
Maize..	1,500
Onions	20
European potatoes	200
Rice	1,500
Vegetables	40
Fruit	100
Banana flour	300
Cassava flour	50
Finger millet	150
Tea (European produce)	215
Total ..	4,725

Land Tenure and Economics of the People

423 In theory all land belongs to the chiefs or sub-chiefs, but in practice once a man has cultivated a plot, that plot belongs to him until he leaves the area in which he lives. If he leaves, the land reverts to the chief or sub-chief and may be given by him through his headman or elder to anyone in his area who is short of land or to a newcomer who wants a plot. Should a man go away and return after a long period and ask for a plot, he is bound [554 609 651] to be given one but not necessarily the plot he had before he left. Newcomers are welcomed and are given land, as the amount of tax collected in an area is an indication of the importance of a chief.

233 Stock grazing is a problem which is coming more and more to the fore. The number of

cattle in the district in the 1941 census was about 2.3 head per taxpayer or 55 head per square mile. Certain land is set aside each year for grazing, where stock is not able to interfere with the produce plots. Compensation for trespass of cattle on cultivated land is only paid among people of the lake shore.

Parts of the land to the west of Tukuyu have been badly eroded by cultivation and over-grazing, and it is only since 1935 that anti-erosion rules have been made to check the tendency for bad cultivation. Since they were brought in, however, the majority of the tribe have become very keen on seeing the effect that well-controlled cultivation has on crops. The following are the Native Authority Rules concerning anti-erosion:—

"Throughout the Rungwa District, all natives shall follow orders regarding cultivation designed to prevent soil erosion as demonstrated and enjoined by the Agricultural Officer.

(*a*) All ridges and terraces shall be contoured and not follow the slope of the hill.

(*b*) In the case of cultivation done on the flat and not on ridges or terraces, a large ridge and ditch shall be dug at the top of the plot to remain permanently and be repaired from time to time."

The Wanyakyusa have never been dependant on outside sources for any of their food, but in their own territory there is no iron for making hoes nor clay for making earthenware pots. The former they were accustomed to get from Ukinga, on the eastern boundary of the district in the Livingstone mountains, and the pots were, and are still, made only by about 500 members of the Wakisi tribe living in a village on the lake shore at the extreme south-western point of the district. The Wakisi are really of Ukinga origin and inhabit the eastern, northern and western shores of Lake Nyasa. They grow no food except cassava, and that only recently, and apart from the one village that makes the pots, their only work is as paddlers of canoes and fishermen. Most of their fish and pots are exchanged for food.

Since the Tukuyu District is so thickly populated and the inhabitants concentrated, it has been found necessary to create produce markets at comparatively short distances. Transport from these markets, during war-time, has become difficult. The natural outlet for Tukuyu native foodstuffs is the Lupa Goldfields, which lie about 100 miles to the

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438 north. Before the war, the goldfields gave work
316 to about 15,000 natives, chiefly Wanyakyusa,
[460] and most of the foodstuffs from this district went there. The goldfields are gradually closing due to difficulties in obtaining spares, and it has been necessary to look for outlets for Tukuyu produce elsewhere. Should the goldfields open again after the war, and large-scale mining start, there is a great future for produce grown in Tukuyu.

434 The main income of the tribe is derived from agricultural, military, mining and public works sources, and it is estimated that in 1941 the average annual income per man, woman and child was about Sh. 10 per year. It has risen considerably since, as over 4,000 men have joined the military and a large part of their salaries comes back to the district in the form of remittances. The agricultural source, from which a larger part of the tribal income
[464] accrues, is from sales of rice, maize and other foodstuffs. A fair number of Wanyakyusa also work on the tea plantations.

241 The picture sketched above will show that the district is inhabited by a tribe whose agriculture is of great interest, since the variety of crops, from wheat in the highlands to paddy and cotton on the lake shore, is perhaps unrivalled in so small an area elsewhere in
181 East Africa. It has not been possible to fill in the picture with details of the people's character, but it is worth mentioning that the Wanyakyusa are a people difficult to administer, argumentative, litigious, self-willed and at times inclined to truculence. Nevertheless their intelligence is such that they are
153 willing to be persuaded, and, once convinced of the benefit of any change, adopt it with energy. This is instanced by the way they have in a few years accepted the principles of anti-erosion to such an extent that now there is perhaps 90 per cent control in the well-populated areas. It should, however, be stressed
434 that, though the soil is not being eroded to
241 any great extent, it is still being impoverished, since increased cultivation for the war effort has involved breaking a great deal of new land with a consequent lessening of fallow. Over-cropping in the hilly country is very great and, in order to prevent further emigration, it be-
[185] hoves the native planters to learn to put something back into the soil in the form of mulch or compost. If care is not taken, a comparatively prosperous country will one day become like so many parts of Africa, where a losing struggle is fought with Nature to obtain a sufficiency for the people's needs.

on 21st September, 1943)